ABSTRACT

A trans-impedance filter circuit provided according to an aspect of the present invention contains an operational amplifier, a first resistor, a first capacitor, a second resistor, and a second capacitor. The second capacitor is connected in parallel between the inverting input terminal and an output path of the operational amplifier. The second resistor is connected between the output terminal of the operational amplifier and a second node on a path connecting the input signal to the inverting input terminal. The first resistor is coupled between the first node and inverting input terminal of the operational amplifier. The first capacitor is coupled between the first node and Vss. Due to such connections, the filter circuit operates as a second order filter circuit, thereby providing a desired high level of filtering. Also, as the filter circuit is implemented with a single operational amplifier, the power and area requirements are reduced.